

Claims

1. Machine for the chip-forming machining of gears and
5 screw-type workpieces, comprising:

- a. a work spindle for the accommodation of a gear or screw-type workpiece to be ground, the said spindle being located for rotation about a first axis on a first slide,
- b. a machine bed bearing the first slide, the first slide
10 being displaceable parallel to the first axis, and
- c. a swivel head located for rotation about a second axis,

wherein on the end front face of the swivel head directed towards the work spindle at least two, preferably four functional
15 units are arranged, which are equipped with machining tools or measuring tools, where by displacement relative to the swivel head and by swivelling of the swivel head at least two of the functional units can be brought as required into active connection with the gear or screw-type workpiece to be machined.

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2. Machine according to claim 1, wherein the swivel head is swivellable through at least $\pm 90^\circ$, preferably up to 360° .

3. Machine according to claim 1 or 2, wherein the second
25 axis is at right angles to the first axis.

4. Machine according to any of the claims 1 to 3, wherein the functional units are arranged radially displaceable relative to the swivel head.

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5. Machine according to any of the claims 1 to 4, wherein at least one of the functional units is displaceable parallel to the swivel axis of the swivel head.

6. Machine according to claim 5, wherein the functional units displaceable parallel to the swivel axis are arranged on infeed slides, which are arranged inside the swivel head.

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7. Machine according to any of the claims 1 to 6, wherein every functional unit is equipped with a machining tool for the grinding, milling, honing, shaving, dressing or other chip-forming machining of a workpiece, or a measuring tool for the
10 measurement of the workpiece geometry of gears and/or screw-type workpieces.

8. Machine according to any of the claims 1 to 7, wherein a power and coolant/lubricant supply to the functional units as
15 well as a signal exchange between the functional units and a machine control system are taken from the back of the swivel head directed away from the work spindle, and lead through the said swivel head.

20 9. Machine according to the claims 6 and 8, wherein the supply and the signal exchange are lead through the allocated infeed slide.

10. Machine according to any of the claims 1 to 9, wherein
25 the work spindle can be driven by electric motor either directly or via a speed reducing gear unit.